

Federal Highway Administration

FINDING OF NO SIGNIFICANT IMPACT

for

Illinois Route 47 (FAP 326) at
Ronald Reagan Memorial Tollway I-88 (FAI 88)
from Old Oaks Road to Green Road
Kane County, Illinois

INTRODUCTION

The Illinois Department of Transportation (IDOT) proposes interchange improvements at Illinois Route 47 (IL 47) and the Ronald Reagan Memorial Tollway (I-88). The project also proposes the widening of IL 47 from the Waubensee Community College north entrance as the southern logical termini to Green Road as the northern logical termini in Sugar Grove, Illinois. The purpose of the proposed action is to improve system linkage and accommodate land use and economic development on IL 47 and I-88 from the north entrance of Waubensee College at the south end of the project to Green Road at the north end.

The Preferred Alternative meets the purpose and need, while minimizing impacts where possible. The Preferred Alternative for the IL 47 Mainline consists of two 12-foot lanes in each direction, a 30-foot raised median through the majority of the corridor but reduced through the Hannaford Woods/Nickels Farm Forest Preserve, and shifts the alignment to the east, north of Thornapple Tree Road. The Preferred Alternative proposes a five-foot sidewalk on the west side of IL 47 and a 10-foot multi-use path on the east side. The Preferred Alternative for the IL 47/I-88 Interchange consists of a partial cloverleaf, with loop ramp in northeast quadrant of the interchange. This alternative creates a full access service interchange by adding an entrance ramp from IL 47 to I-88 eastbound and an exit ramp from westbound I-88 to IL 47. It also includes a loop ramp in the northeast quadrant for northbound IL 47 traffic to enter I-88 westbound. The loop ramp improves the operations of travelers utilizing the entrance ramps of the interchange.

This project is included in the FY 2014-2019 Transportation Improvement Plan (TIP) endorsed by the Metropolitan Planning Organization Policy Committee of the CMAP for the region in which the project is located. Phase II (final design) and Phase III (construction) funding is also identified in the TIP. The TIP number for this project is 09-14-0010.

ENVIRONMENTAL IMPACTS

The direct result of implementing these improvements will result in the following impacts:

Right-of-Way: Construction of the proposed improvement will require approximately 16.1 acres of proposed right-of-way.

Displacements: The proposed improvements would not result in any residential or commercial displacements.

Agricultural Lands: The proposed improvements would convert 11.0 acres of land identified by CMAP as land use: agricultural. Of this, only 6.1 acres is actively being farmed.

There are two Centennial Farms in the Blackberry Township and three Centennial Farms in the Sugar Grove Township. Based on coordination with the IDOA, there are no registered Centennial Farms located within the project limits. IDOA determined the proposed project was compliant with the Illinois Farmland Preservation Act on November 28, 2017.

Historic Properties: There are two archaeological sites within the Area of Potential Effect (APE). These two sites lack integrity and information potential and do not warrant National Register consideration or preservation in place. No architectural resources eligible for the National Register are located within the study area. The State Historic Preservation Officer concurred with a “no historic properties affected” finding on November 2, 2016.

Air Quality: All areas of Illinois currently are in attainment of the standards for four of the six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. For the eight-hour ozone and PM2.5 standards, Kane County is designated as a nonattainment area.

This project is included in the FY 2014-2019 Transportation Improvement Program (TIP) endorsed by the Metropolitan Planning Organization Policy Committee of the CMAP for the region in which the project is located. Projects in the TIP are considered to be consistent with the 2040 regional transportation plan endorsed by CMAP. The project is within the fiscally constrained portion of the plan.

On October 9, 2014, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) determined that the 2040 regional transportation plan conforms with the SIP and the transportation-related requirements of the 1990 Clean Air Act Amendments. On October 9, 2014, the FHWA and the FTA determined that the TIP also conforms with the SIP and

the Clean Air Act Amendments. These findings were in accordance with Determining Conformity of Federal Actions to State or Federal Implementation Plans 40 CFR Part 93.

The project's design concept and scope are consistent with the project information used for the TIP conformity analysis. Therefore, this project conforms to the existing State Implementation Plan and the transportation-related requirements of the 1990 Clean Air Act Amendments.

Noise: There are five common noise environments (CNE), representing 84 noise sensitive receptors that are predicted to experience noise levels that approach, meet or exceed the NAC in the 2040 Build conditions. These five (5) CNEs were determined to have traffic noise impacts from the proposed action. The results for the proposed improvements indicate no substantial increases in noise (15 dBA or greater) over the existing noise levels will occur. The most practical type of noise abatement for this project was determined to be a noise wall.

Noise walls were evaluated at each impacted CNE to determine if they were feasible (able to be constructed and can provide a substantial noise reduction), and if they were reasonable (able to achieve IDOT's noise reduction design goal and cost effective).

Potential noise barriers were considered at five (5) receptor locations under the predicted 2040 Build condition (CNE 2, CNE 3, CNE 5, CNE 6 and CNE 8). The noise barriers evaluated at CNE 6 and CNE 8 are not feasible, as they do not satisfy the five-dB(A) noise reduction for at least two (2) impacted receptors. Three (3) feasible noise barriers were assessed for reasonableness (CNE 2, CNE 3 and CNE 5).

The three (3) feasible noise barriers are not reasonable because the cost per benefitted receptor exceeds the adjusted allowable cost per benefitted receptor (CNE 2, CNE 3, and CNE 5).

Cost averaging of noise abatement among CNEs also may be used when conducting the economic reasonableness evaluation. For a single noise abatement measure to be considered a part of a cost averaging evaluation, the estimated build cost of noise abatement per benefitted receptor may not exceed two times the adjusted allowable noise abatement cost per benefitted receptor. For cost averaging analyses, the noise abatement measures achieve the cost reasonableness criterion if the common CNE collective average estimated build cost of noise abatement per benefitted receptor is less than the collective average adjusted allowable cost per benefitted receptor. The three (3) feasible noise barriers were not found to be reasonable through cost averaging (CNE 2, CNE 3, and CNE 5).

The third component of reasonableness is obtaining the viewpoints of benefitted receptors. Since the noise barriers evaluated failed to meet the IDOT feasibility or reasonableness criteria, obtaining the viewpoints of benefitted receptors was not required.

The proposed project is anticipated to have traffic noise impacts, but the noise barriers studied and identified in Table 4.8 do not meet IDOT's feasibility and reasonableness criteria. Due to this, traffic noise abatement measures are not likely to be implemented based on preliminary design. If the project's final design is different from the preliminary design, IDOT will determine if revisions to the traffic noise analysis are necessary. A final decision on noise abatement will not be made until the project's final design is approved and the public involvement processes is complete.

Threatened and Endangered Species: According to USFWS, three federally-protected species are known to occur within Kane County, the eastern prairie fringed orchid (*Platanthaera leucophaea*), rusty patched bumble bee (*Bombus affinis*), and northern long-eared bat (*Myotis septentrionalis*).

Utilizing the USFWS January 5, 2016 Programmatic BO for the northern long-eared bat (*M. septentrionalis*), a streamlined consultation form was submitted by IDOT on September 15, 2017 to USFWS. No response was received from USFWS, therefore, the "may affect, not likely to adversely affect" determination can be presumed agreed upon. No tree clearing will occur between April 1st and October 14 of any year per IDOT commitment to IDNR.

The project area had field surveys conducted for the Eastern Prairie Fringed Orchid (*P. leucophaea*) in June and July of 2016; none were located. The project will have "no effect" on the Eastern Prairie Fringed Orchid.

The project was evaluated using USFWS guidance dated March 21, 2017 and titled "The Rusty Patched Bumble Bee (*Bombus affinis*), Interagency Cooperation under Section 7(a)(2) of the Endangered Species Act, Voluntary Implementation Guidance." According to the guidance, if a project is outside of a high potential zone, then the USFWS advises that a "no effect" determination is appropriate. USFWS shapefiles dated March 15, 2018, were reviewed on April 30, 2018. This project is located outside of the High Potential Zone. Therefore, the project will not effect the Rusty Patched Bumble Bee.

Five state protected species were identified in the project study area: the Blanding's turtle (*Emydoidea blandingii*), Wilson's phalarope (*Phalaropus tricolor*), American Bittern (*Botaurus lentiginosus*), Least Bittern (*Ixobrychus exilis*), and Northern Harrier (*Circus cyaneus*).

Surveys were conducted and no threatened and endangered reptiles or amphibians were encountered, and no suitable habitats for Blanding's turtle (*E. blandingii*) were documented in the project area.

Avian surveys were conducted over three seasons and no breeding habitat for the Wilson's phalarope (*P. tricolor*), Least Bittern (*I. exilis*), American Bittern (*B. lentiginosus*), or Northern Harrier (*C. cyaneus*) was found in the project area.

No state-listed species are anticipated to be impacted by the proposed improvements.

Wetlands: The proposed improvements will impact a total of 1.7 acres of wetlands. Impacts were calculated based on proposed construction limits. The proposed improvements were designed to minimize the amount of wetland impacts to the greatest extent practicable. Once the alternatives were selected, they were further refined in order to minimize impacts.

For those wetland impacts that cannot be avoided, compensatory mitigation must be provided. IDOT will provide compensatory mitigation through coordination with and approval from USACE during the Clean Water Act Section 404 Permitting process. Wetland mitigation will also be in compliance under the Interagency Wetland Policy Act.

Federal Executive Order 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The proposed improvements were designed to avoid and minimize wetland impacts to the greatest extent possible. There are no practicable alternatives that could avoid wetland impacts entirely. All impacts have been avoided and minimized to the greatest extent practicable, as discussed above. Based upon these considerations, there is no practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

Floodplains: The proposed improvements will impact three regulatory floodplains. All of the Regulatory floodplain within the project study area are associated with Blackberry Creek and Seavey Road Run. The roadway corridor is constrained to the setting where the current IL 47 is located. Construction on an entirely new corridor was studied in Alternatives M-3 and M-4; both will create new crossings of Blackberry Creek and Seavey Road Run, which increases waterway and floodplain impacts. The median at the Blackberry Creek crossing has been narrowed from 30 feet to 18 feet which will reduce waterway, and floodplain impacts. The proposed improvements will impact 3.2 acres associated with Blackberry Creek and 1.5 acres associated with Seavey Road Run for a total floodplain impact of 4.7 acres.

Compensatory storage will be provided at the Blackberry Creek crossing by replacing the existing structure with a larger bridge that provides a wider effective waterway opening. The compensatory storage volume can be provided by grading the overbanks between the existing tops of banks to the proposed toes of abutments. Since the Seavey Road Run culvert is being extended rather than replaced, the compensatory storage at the tributary location will be provided within proposed ditch/basin grading along the proposed IL 47 embankment, adjacent to the regulatory floodway.

Water Resources: The project area is located within the Lower Fox River drainage basin, hydrologic unit code (HUC) 07120007. The project area contains eight streams or creeks identified as WOUS. Two relatively permanent streams cross the project, Blackberry Creek, approximately 771 feet south of Thornapple Tree Road and under I-88 approximately 3,355 feet west of IL 47, and Seavey Road Run (also known as Tributary C of Blackberry Creek), approximately 636 feet northwest of Thornapple Tree Road. There are no wild or scenic rivers located within the project study area.

The project improvements propose to replace the existing bridge over Blackberry Creek on the existing centerline. The median for the roadway is reduced from 30 feet to 18 feet in this area in order to minimize impacts.

Blackberry Creek has been given a Stream Integrity Rating of B and Stream Diversity Rating of C by the IDNR Illinois Biological Stream Characterization Study. No other WOUS in the project study area has been rated in the IDNR Illinois Biological Stream Characterization Study.

A total of 0.8 acres of WOUS will be impacted within the project study area, including 0.4 acres of impact to Blackberry Creek and 0.2 acres to Seavey Road Run. Impacts to the streams are not avoidable as the proposed road improvements are adjacent to or crossing these water bodies. Impacts were minimized by reducing the median to 18 feet at the Blackberry Creek.

In order to minimize impacts from entering either Blackberry Creek or Seavey Road Run, Best Management Practices (BMPs) will be implemented to the extent practicable.

Special Waste: The Illinois State Geological Survey (ISGS) performed a PESA for the project study area, ISGS PESA #3121, dated September 19, 2016. Several Recognized Environmental Concerns (RECs) were identified through the assessment. Per PESA 3121, 7 properties were identified with RECs.

Based on the results from the PESA, it has been determined that a preliminary site investigation (PSI) is required if any identified REC involves any of the following situations:

- New right-of-way or easement (temporary or permanent);
- Railroad right-of-way, other than single rail rural with no maintenance facilities;
or
- Building demolition / modification.

Section 4(f): The proposed improvements will convert 1.74 acres of open space within the Hannaford Woods/Nickels Farm Forest Preserve to a transportation use. FHWA considers the Hannaford Woods/Nickels Farm Forest Preserve a Section 4(f) property. This conversion of Section 4(f) land to a transportation use will not adversely affect the activities, features, or attributes of the Hannaford Woods/Nickels Farm Forest Preserve. The public was given an opportunity to comment on the impacts to the Section 4(f) resource on December 14, 2017 and none were received. The Hannaford Woods/Nickels Farm Forest Preserve (the Officials with Jurisdiction) concurred with this conclusion on February 16, 2018. Based upon avoidance, minimization, and mitigation or enhancement measures, and concurrence from the Officials with Jurisdiction, FHWA approved a *de minimis* impact determination on March 19, 2018.

Indirect and Cumulative: Illinois Route 47 within the project is an existing 2 lane road with a partial interchange at Ronald Reagan Memorial Tollway I-88. This project will create a full interchange and widen IL 47 to 4 lanes in this area. This proposed action is expected to provide improved access to the area, potentially enhancing the likelihood of growth in the area already planned for development. The cumulative effects of actions taken will primarily be those associated with new development which may occur based on the improved access. Any future actions will be subject to applicable federal, state and local laws and regulations.

Public Involvement: The Public Hearing for the project was held on Thursday, December 14, 2017 from 4:00 P.M. to 7:00 P.M. in the APC Event Room at Waubensee Community College. The public hearing was conducted in an open house format with a public comment forum. A court reporter was present to record verbal comments from 4:00 P.M. to 6:00 P.M. and then recorded comments at the public forum from 6:00 to 7:00 P.M.

The project comment period was open from November 27, 2017 to January 19, 2018. Throughout the public comment period, hard copies of the EA were available for public review at IDOT – District 1 offices as well as the Sugar Grove Village Hall, and Sugar Grove Public Library. The EA was also available on the project website.

The hearing was attended by 98 people including public officials from local Villages and Fire Protection Districts, businesses, media and local residents. Within the comment period 13 comments were received at the meeting, 5 comments received during the open house, 10 public forum comments and 3 emailed comments. The total is 31 comments submitted during the public comment period. The comments received are summarized below.

General Support or Opposition to Preferred Alternative

- Support Project due to Travel Time Savings and Reduces IL 47 congestion
- Support for the No-Build Alternative
- Like the improvements to IL 47 north of the interchange

Schedule/Implementation

- Build the improvements soon
- Safety concerns regarding the interchange moving forward and the IL 47 project being delayed
- Desire the interim improvement to the interchange extend on IL 47 to the proposed U-turn

Safety

- Safety concerns regarding traffic control devices at Local Street Intersections with IL 47
- Safety concerns regarding the speed of truck traffic on hills; wanting right turn lanes
- Safety concerns regarding the location of the bike path on the IL 47 bridge over I-88

Access and Other

- Want more access to IL 47 from adjacent land use
- Do not want Finley Road access restricted to IL 47
- Want to Realign Merrill Road to align with opposing cross street
- Want Emergency Vehicle Accommodations at Finley to access interchange
- Want Emergency Vehicle Access to Restricted Access Side Streets
- Want Emergency Vehicle Accommodations at U-Turn
- Desires to restrict adjacent land uses and development

IDOT responded to all comments received during the public comment period.

ENVIRONMENTAL COMMITMENTS

- Wetlands and waters of the U.S. will be mitigated per USACE and the Interagency Wetlands Policy Act, which will be identified during the Section 404 permitting process.
- All tree removal will occur between October 15 and March 31 to avoid impacts to the northern long-eared bat (*Myotis septentrionalis*) habitat.
- A wildlife crossing will be included at Blackberry Creek.

AGENCY FINDINGS

The following findings establish the project's adherence to applicable laws intended to protect sensitive environmental and socioeconomic resources.

Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended

Easements and partial right-of-way takes will be required from parcels along the corridor, but full parcel takes will not be required. The acquisition of any property will be accomplished in accordance with the Uniform *Relocation Assistance and Real Property Acquisition Act (Uniform Act)*, as amended, and the *IDOT Land Acquisition Procedure Manual*, as applicable.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

The project does not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations. This project is not located in or near minority and/or low income areas, or adjacent to minority and/or low income neighborhood communities.

Section 106 of the National Historic Preservation Act of 1966

There are two archaeological sites within the Area of Potential Effect (APE). These two sites lack integrity and information potential and do not warrant National Register consideration or preservation in place. No architectural resources eligible for the National Register are located within the study area. The State Historic Preservation Officer concurred with a "no historic properties affected" finding on November 2, 2016.

Federal Executive Order 11988, *Floodplain Management*

The project will impact three regulatory floodplains for a total of 4.7 acres. Compensatory storage will be provided at the Blackberry Creek crossing and Seavey Road Run for impacts to regulatory floodplains. Impacts from the loss of floodplain will not result in increased flood risks due to the incorporation of detention and compensatory storage. Natural and beneficial values, such as

wildlife habitat and water quality functions, will not be substantially impacted because these values are already minimized due to the presence of the existing road. The proposed roadway improvements will not promote incompatible floodplain development.

Section 176(c) of the Clean Air Act Amendments of 1990

This project is located in a nonattainment area for transportation-related criteria pollutants; therefore, the transportation conformity requirements of the Clean Air Act apply. FHWA has determined that the preferred alternative meets project level conformity requirements because it is included in the conforming metropolitan transportation plans and transportation improvement programs of the appropriate metropolitan planning organization.

The project was determined to be a project that is not an air quality concern under 40 CFR 93.123(b)(1), because it primarily services gasoline operated vehicular traffic. None of the roadways in the study area carry a substantial amount of diesel truck traffic currently nor are they expected to under the 2040 No-Build or Build condition. It has been determined that the project will not cause or contribute to any new localized PM2.5 or PM10 violations or increase the frequency or severity of any PM2.5 or PM10 violations.

Federal Executive Order 11990, *Protection of Wetlands*

The project will impact 1.7 acres of wetlands. Because wetlands exist on both sides of the roadway, complete avoidance was not practicable. However, the Preferred Alternative was designed to minimize impacts to wetlands. Mitigation for these impacts will be based on the Programmatic Agreement that IDOT has with the IDNR for compliance with the Interagency Wetland Protection Act. Mitigation ratios are determined based on whether or not the mitigation is provided within the watershed basin of the impacted wetland as well as the quality of the wetlands impacted. Wetland mitigation ratios can range from 1.5 to 1.0 up to 5.5 to 1.0 for higher quality wetlands.

Endangered Species Act of 1973

Threatened and endangered species are known to exist within Kane County. The project area had field surveys conducted for the Eastern Prairie Fringed Orchid (*P. leucophaea*) in June and July of 2016; none were located. Therefore, the project will have “no effect” on the Eastern Prairie Fringed Orchid.

The rusty patched bumble bee (*B. affinis*) was listed as endangered on March 21, 2017. The rusty patched bumblebee is not identified by IPaC within the project study area; therefore, the project will have “no effect” on the rusty patched bumble bee.

Utilizing the USFWS January 5, 2016 Programmatic BO for the northern long-eared bat (*M. septentrionalis*), a streamlined consultation form was submitted by IDOT on September 15, 2017 to USFWS. No response was received from USFWS, therefore, the "may affect, not likely to adversely affect" determination can be presumed agreed upon. No tree clearing will occur between April 1st and October 14 of any year per IDOT commitment to IDNR.

Section 4(f) of the U.S.DOT Act of 1966

FHWA has determined that the proposed project will not adversely affect the activities, features, or attributes of the Hannaford Woods/Nickels Farm Forest Preserve and based upon the impact avoidance, minimization, and mitigation or enhancement has made a *de minimis* impact finding on March 19, 2018.

CONCLUSION

The Federal Highway Administration (FHWA) has determined that the project will not have a significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment and Errata which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

Date

06/07/2018

Catherine A. Batey, Division Administrator
Federal Highway Administration

